

slightly inclined in a spiral (as in the unicellular hairs of the corolla), ascending to the right, as viewed from the centre. The edge of the lower portion of these hairs sometimes presents an almost even outline, but frequently (and perhaps nearly always towards the extremity of the hair) a slight irregular beading occurs, exactly as we might expect, were the dots or markings occasioned by external matter; but I am not sure that this appearance is incompatible with the idea that they may be openings or slits in a secondary deposit on the common wall of the hair, which, from an examination, solely of the markings in the central portions, we might conclude they were. I have not detected in these hairs actual motion of the cell-sap, but mucilaginous threads may be easily seen radiating irregularly from the nuclear vesicle, indicating such a circulation. With regard to the contents of the nucleus I cannot certainly speak. Sulphuric acid diluted, causes the primordial utricle to contract and lie in the interior as a loose sac; in some small cells the separation is not apparent after twenty-four hours' action.

A solution of chloride of calcium causes a partial dissolution of the primordial utricle, certain bodies, perhaps including the true nucleus, remaining visible.

The epidermis of the intervenal spaces of the under side of the leaf consists of cells with a sinuous boundary, numerous stomata formed by two crescentic cells applied by their extremities being scattered about,

Acicular raphides are of frequent occurrence; they abound also in the glandular stipules found between the petioles of the opposite leaves.

The application of pressure causes the escape of very numerous raphides, together with a peculiar thick fluid. In some instances this substance has a vermiform appearance when forced out of the enclosing sac, owing to its having been exuded, I suppose, through a small orifice.

## MISCELLANEOUS.

*On the Coccidæ of the Olive, Orange, Lemon, and Rose-bay, and on the Maladies produced by them on those trees in the Province of Nice and in the Department of the Var.* By M. ROBINEAU-DESVOIDY.

THE author proceeded to the South of France with the view of ascertaining the cause of a malady which had long been prevalent on the above trees in that part of the country, and which it was supposed had made its appearance in the central and northern departments.

This disease, called *morfée* by the Italians, *fumagine* in the North of France, consists in a thick, black crust which covers the trunks, branches, &c. of trees, sometimes over a considerable extent of country. The trees become arrested in their growth, languid and barren.

According to historical accounts, this disease has not appeared

more than a century. It is said to have first occurred near Rome, and thence to have spread through the whole of Italy, and lastly into France. It every year makes fresh progress, and no means have yet been found to arrest it.

The Italians are not agreed as to whether this disease be a special malady, or merely the result of the attacks of *Coccidæ*. The author supports the latter opinion, stating that the disease never occurs except upon trees attacked by those insects.

Of these he says that the *Coccus adomdum*, a native of Senegal, attacks especially the citron and lemon trees; the *Coccus hesperidum*, a native of America and Africa, prefers the orange, rose-bay and peach trees; the *Coccus aonidum*, native of the Indian Archipelago, attacks the Lauraceous trees; the *Coccus oleæ* commits the greatest ravages upon the olive-trees, but also attacks the oranges and a number of other trees; it is the most destructive of all.

Rich, moist, well-cultivated localities are most favourable to the development of these insects, and it is in these that they commit the greatest ravages.—*Comptes Rendus*, 2 Août, 1852, p. 183.

OBITUARY.—JAMES FRANCIS STEPHENS.

James Francis Stephens, F.L.S., late President of the Entomological Society, &c., died on the 22nd of December, at his house in Foxley Road, Kennington, of inflammation of the lungs.

Mr. Stephens was in his 61st year, having been born at Shoreham on the 16th of September, 1792; he was the son of a naval officer. He has left a widow to deplore her loss, his only child, a son, having died some years ago.

Mr. Stephens was the author of the 'Systematic Catalogue of British Insects,' the 'Illustrations of British Entomology,' 'Manual of British Coleoptera,' of a 'Catalogue of the British Lepidoptera in the Collection of the British Museum,' and editor of the latter volumes of 'Shaw's General Zoology' containing the Birds.

Mr. Stephens was a clerk in the Admiralty, but lately retired on a superannuation. Early in life he paid considerable attention to electricity and meteorology; but for the greater part of the last half-century he devoted the whole of his leisure to the study of the natural history of the British Islands, and had formed the most complete and best arranged collection of the insects of this country that had ever been brought together. This collection and his extensive library of entomological works he, in the most liberal manner, opened to the inspection of any students who wished to consult it for scientific purposes, on every Wednesday in the year; hence most of the cabinets in the country are named in conformity with it. In 1839 his Collection of British Insects consisted of 12,449 species and 88,132 specimens contained in 193 drawers, and it has been very much increased since that period.

In 1818 he assisted Dr. Leach to form and arrange the Collection of Insects in the British Museum, permission having been obtained from the Lords of the Treasury that he might be temporarily absent from his office for the purpose.